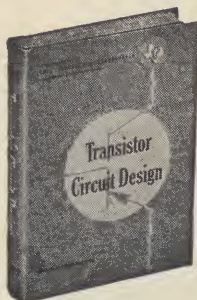


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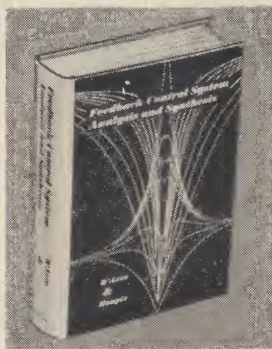
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Associate Professors of Electrical Engineering, Air Force Institute of Technology
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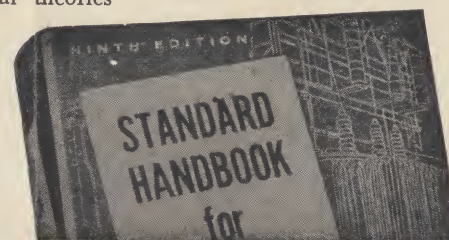
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by Dr. James J. Brophy

*Vice President
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112 pages, illustrated, \$5.95*

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. . . electronic engineers interested in wanting to know the scientific basis for the device properties they work with

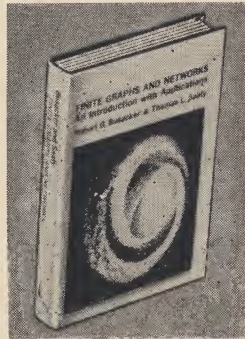
. . . the businessman considering investments in electronic firms to help them evaluate the significance of new semiconductor device developments

. . . the non-electrical engineering men who want to be aware of this important field.

The emphasis throughout this book is on the operation, structure and characteristics of the most important semiconductor devices. The approach is based on the properties of semiconducting materials and is shown in a non-mathematical but scientifically correct manner. It enables you to completely understand the operations of the more than thirty devices explained without the necessity of understanding the mathematical complexities. The detailed descriptions and realistic illustrative examples make every concept crystal clear. Stressing the importance of semiconductor electronics, this book makes it possible for you to obtain a working knowledge of this subject in an easily readable form. Useful approximations are repeatedly stressed to give you a thorough understanding of semiconductor devices, the properties of semiconducting materials and their operation.

McGRAW-HILL BOOK CO., 330 W. 42nd St., New York, N. Y. 10036

How to use linear graph fundamentals in a wide range of problems



FINITE GRAPHS AND NETWORKS

By **ROBERT G. BUSACKER**
Research Analysis Corporation
and **THOMAS L. SAATY**

U.S. Arms Control and Disarmament Agency

294 pages, 6 x 9, 200 illustrations, \$11.50

Fundamental definitions, terms, and symbols describing and classifying undirected and directed graphs are fully covered in this helpful book. It also includes other basic developments centering around various ways of partitioning the elements of graphs and the measurement of distances in graphs . . . properties and characterizations of planar graphs . . . coloring problems . . . algebraic considerations . . . matrices . . . and other analyses.

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6. A Variety of Interesting Applications
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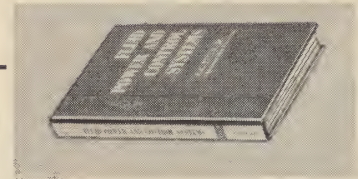
This book gives you a clear, extensive treatment of the fundamentals of the mathematical theory of linear graphs. You'll find it especially useful for its large number and variety of applications in economic, game, social, engineering, scientific, and other mathematical problems. Examples point up basic concepts, and special exercises aid in your self-study use of the book. For those in industrial and military operations research, industrial engineering, systems analysis, economic and social models, and other areas of physical and human sciences, it offers a uniquely useful working tool.

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- some specially structured flow problems
- multi-commodity flow problems

How to design modern fluid power control systems



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9. The Distribution System
10. The Reservoir System
11. Heat in the Fluid Power System
12. The Transmission Medium

systems development—are reviewed. Also included is a complete discussion of basic pumps, motors, and valves. Those mathematical considerations pertinent to component selection are presented from a practicing engineer's standpoint. In addition, the book gives a special presentation of the characteristics of the fluid medium.

By **ERNEST C. FITCH, JR.**

Associate Professor, School of Mechanical Engineering, Oklahoma State University

250 pp., 5 3/8 x 8, 144 illus., \$5.95

ALL-INCLUSIVE IN SCOPE, this valuable book's treatment of fluid power is at the same time strong on practical detail. It introduces basic fluid circuitry and the design of fluid systems, and covers the design and selection of accumulators and fluid cylinders. A unique chapter deals with fluid reservoirs; another presents the practical aspects of heat transfer in fluid systems.

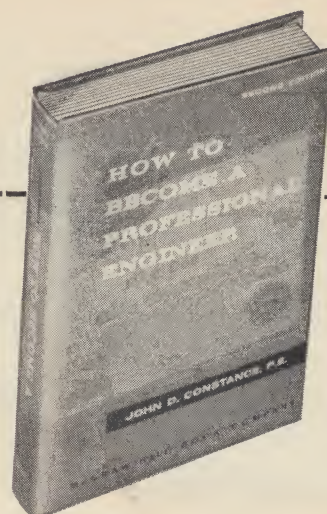
In addition, the book helps you calculate and understand the interrelations of systems components. Among those included are the hydrostatic transmission chart, which relates all controlling variables involved in pump motor systems, and a cylinder rod nomograph, which reduces the normal trial-and-error solution to an accurate one-step method.

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Second Edition

HOW TO BECOME A PROFESSIONAL ENGINEER

By John D. Constance, P.E.
Engineering Registration Consultant

294 pages, 5 $\frac{3}{8}$ x 8, \$7.50

Prepared in cooperation with the National Council of State Boards of Engineering Examiners, this thoroughly updated Second Edition presents the broad picture of licensing procedures in the United States along with the current addresses of the boards and their Canadian counterparts. It gives the recent graduate a course to follow for a successful professional career. It gives the more mature graduate and non-graduate engaged in engineering much needed help in their belated quest for licensure.

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ABOUT THE AUTHOR

For 20 years John D. Constance has been preparing engineers for licensure in various states. He is an experienced chemical engineer, a Registered Professional Engineer in New York and New Jersey, and holds a certificate of qualification from the National Bureau of Engineering Registration. He is associated with the refresher course and orientation work of ASME, IEEE and ASCE. He has taught and conducted refresher courses for these societies, New York University, the U. S. Army, and many large corporations. A recognized authority and guidance counselor in this specialized field, it is this vast experience that Mr. Constance uses to show you every step of registration procedures to make it easier for you to become a Professional Engineer.





Modern techniques utilizing analog, digital, and hybrid
analog-digital computers for random process studies

RANDOM-PROCESS SIMULATION AND MEASUREMENTS

By GRANINO A. KORN

Professor of Electrical Engineering, University of Arizona

Mr. Korn is the author of *Basic Tables in Electrical Engineering*. He is coauthor with Harry D. Husky of *Computer Handbook* and with Theresa M. Korn of *Electronic Analog and Hybrid Computers* and *Mathematical Handbook for Scientists and Engineers*.

212 pages, 6 x 9, 141 illustrations, \$12.50

THIS AUTHORITATIVE BOOK provides valuable coverage of random-process simulation and random-process measurements—particularly emphasizing computer techniques. In addition to needed theory, it fully describes instrumentation and computing procedures.

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tems. An important section introduces direct simulation of random phenomena by hybrid-computer Monte-Carlo techniques. Described here are devices and procedures for practical measurement of time and sample averages, correlation functions, and probability distributions—including joint distributions of two random variables.

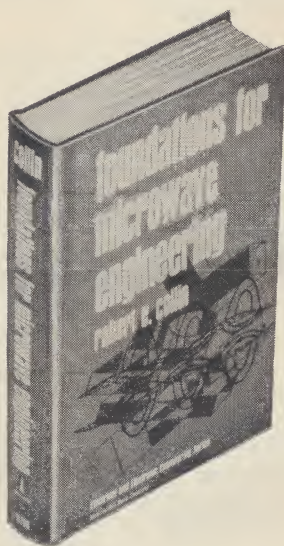
In addition, the book discusses the theory and practice of statistical measurements with quantized data. Also reviewed are analog and digital methods for power-spectrum estimation . . . and modern analog-hybrid computing techniques for Fourier analysis and impulse-response measurements. The closing section demonstrates the power and sophistication of the hybrid-computer Monte-Carlo technique in terms of some practical examples and applications.

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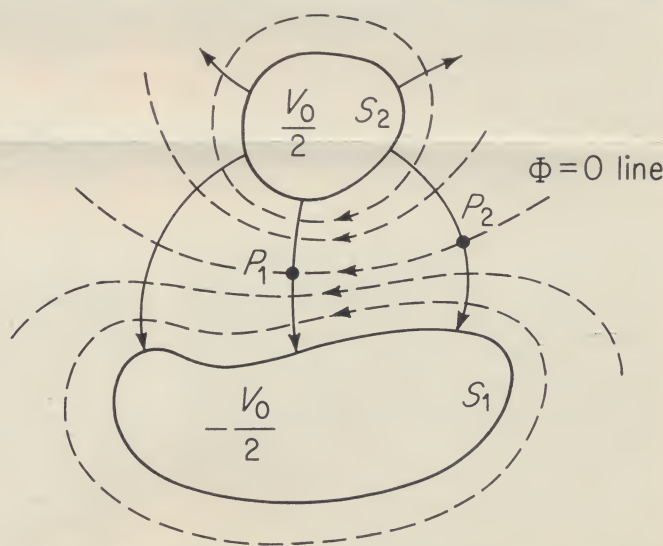
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Professor of Electrical Engineering, Case Institute of Technology

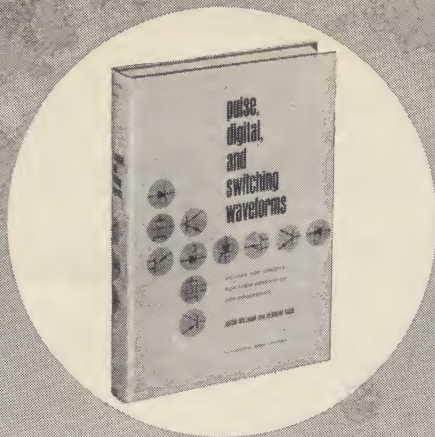
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By **Jacob Millman, Ph.D.** & **Herbert Taub, Ph.D.**

Professor of Electrical Engineering
Columbia University

Professor of Electrical Engineering
The City College of New York

958 pages, 6 $\frac{3}{4}$ x 9 $\frac{1}{4}$, 803 illustrations, \$18.00

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ELECTRICAL AND ELECTRONIC ENGINEERING SERIES

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